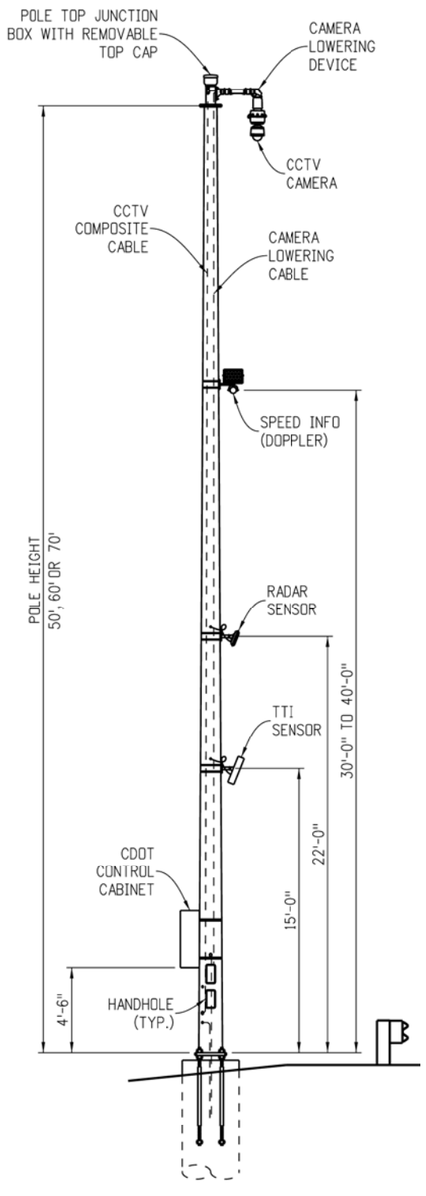

CCTV POLE

GENERAL NOTES

1. ALL STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS SHOWN IN THE MATERIALS TABLE.
2. POLES SHALL BE FABRICATED INTO THE LARGEST PRACTICAL SECTIONS PRIOR TO GALVANIZING. SPLICE LOCATIONS AND DETAILS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL AND THE CONTRACTOR SHALL NOT COMMENCE FABRICATION UNTIL SUCH SPLICE LOCATIONS ARE APPROVED. THE MINIMUM LENGTH OF ANY TELESCOPIC (SLIP TYPE) FIELD SPLICES SHAL BE 1.5 TIMES THE INSIDE DIAMETER OF THE EXPOSED END OF THE FEMALE SECTION.
3. ALL CONCRETE SHALL BE CLASS BZ WITH AIR ENTRAINMENT; REINFORCING STEEL SHALL BE GRADE 60. CAISSON FOUNDATIONS SHALL REACH THE SEVEN DAY PREDICTED STRENGTH BEFORE POLES ARE ERECTED THEREON.
4. A DISCONNECT FOR THE POWER SUPPLY TO THE CAMERA SHALL BE PROVIDED AS SHOWN IN THE ROADWAY PLANS.
5. POLE SHALL BE GROUNDED IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES.
6. NPS = NOMINAL PIPE SIZE; O.D. = OUTSIDE DIAMETER.
7. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW IN ACCORDANCE WITH SUBSECTION 105.02 OF THE STANDARD SPECIFICATIONS.
8. CAISSONS, POLES AND SURVEY WORK SHALL BE PAID FOR IN ACCORDANCE WITH BID ITEMS 503, 614 AND 625 RESPECTIVELY.
9. THERE SHALL BE NO PENETRATIONS OF POLES OTHER THAN AS SHOWN ON THESE PLANS UNLESS APPROVED BY THE ENGINEER PRIOR TO FABRICATION.
10. ATTACH CONTROLLER CABINET TO POST WITH TWO ½" WIDE STAINLESS STEEL BANDS AND STAINLESS STEEL FLARED LEG BRACKETS WITH HEX HEAD BOLTS (BAND-IT D315 OR EQUIVALENT).
11. ALL PIPE MEMBERS SHALL BE HOT-DIP GALVANIZED INSIDE AND OUTSIDE AFTER FABRICATION AS PER ASTM A123, UNLESS PAINTING IS CALLED FOR ON THE PLANS. PAINTING SHALL CONFORM TO SECTION 522, DUPLEX COATING SYSTEM. ALL NUTS, BOLTS AND WASHERS FOR POLE STRUCTURES SHALL BE GALVANIZED AFTER FABRICATION AS PER ASTM A123 OR ASTM A153, AS APPROPRIATE, AND SHALL NOT BE PAINTED.

DESIGN DATA

SPECIFICATIONS:

DESIGN:	"STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (2009 AASHTO).
WIND DESIGN:	110 MPH VELOCITY (3-SECOND GUST) 1" MAXIMUM POLE TOP DEFLECTION @ 30 MPH VELOCITY (NO GUST FACTOR)
FATIGUE DESIGN:	VORTEX SHEDDING - MODE 1 VIBRATION FOR POLE ONLY NATURAL WIND GUST - ON POLE AND ATTACHMENTS GALLOPING AND TRUCK INDUCED GUSTS - NOT APPLICABLE
LOADINGS:	1. TOP OF POLE: 2.50 SF EPA, 95 LB 2. 40' FROM BASE: 2.00 SF EPA, 30 LB 3. 22' FROM BASE: 1.50 SF EPA, 5 LB 4. 15' FROM BASE: 3.50 SF EPA, 10 LB 5. 6' FROM BASE: 10.00 SF EPA, 100 LB
CONSTRUCTION:	CDOT STANDARD SPECIFICATIONS, THESE SHEETS AND PROJECT PLANS.

CCTV POLE X-SECTION SHEET(S) SHALL SHOW:

1. POLE LOCATION (HIGHWAY, STATION AND DIRECTION)
2. OFFSET FROM SHOULDER
3. POLE HEIGHT
4. CAISSON DIAMETER AND MINIMUM EMBEDMENT
5. TOP OF CAISSON ELEVATION
6. CAISSON PAY LENGTH
7. STATIONS AND OFFSETS TO CAISSON
8. GUARDRAIL PROTECTION LIMITS
9. LOCATION OF DISCONNECT FOR THE POWER SUPPLY
10. LOCATION OF REMOTE ACCESS CABINET ON POLE
11. AS CONSTRUCTED BLOCK

GENERAL NOTES (CONTINUED)

12. WELDING OF STEEL SHALL CONFORM TO THE REQUIREMENTS OF AWS D 1.1. ALL AREAS TO BE WELDED SHALL BE GROUND TO BRIGHT METAL. NO BUTT WELD SPLICES WILL BE PERMITTED. ALL WELDING AND REQUIRED TESTING SHALL BE COMPLETE BEFORE ANY MATERIAL IS GALVANIZED.

    ENHANCED MAGNETIC PARTICLE TESTING SHALL BE PERFORMED ON AREAS DEFINED IN AWS D1.1 AND HEREIN. ENHANCED MAGNETIC PARTICLE TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM E 709 AND AWS D 1.1, EXCEPT AS AMENDED HEREIN. ALTERNATING CURRENT SHALL BE USED. THE YOKE SPACING SHALL BE BETWEEN 2 AND 4 INCHES. THE MINIMUM LIFTING POWER SHALL BE 10 LBS. RED DRY PARTICLES SHALL BE USED. THE LIGHT INTENSITY SHALL MEET ASTM E 709, SECTION 7. PARTICLE APPLICATION AND SPECIMEN PREPARATION SHALL MEET THE REQUIREMENTS OF ASTM E 709 SECTIONS 9 AND 15, EXCEPT WHITE NON-AQUEOUS DEVELOPER MEETING ASTM E 165, TYPE 3, SHALL BE APPLIED TO THE TEST SURFACE PRIOR TO TESTING.

    THE YOKES SHALL BE SET IN TWO POSITIONS WHEN TESTING THE WELD OR BASE METAL. THEY SHALL BE POSITIONED BOTH NORMAL AND PARALLEL WITH RESPECT TO THE WELD AXIS AND ROLLING DIRECTION OF THE BASE METAL.

    ENHANCED MAGNETIC PARTICLE TESTS SHALL BE PERFORMED AT THE FOLLOWING LOCATIONS:

    (1) BASE METAL. ALL AREAS CONTACTED BY THE CARBON ARC GOUGE ELECTRODE, THE ELECTRODE CUP, AND THE WELDING ELECTRODE. ALL THREE CONDITIONS ARE ARC STRIKES.

    (2) FILLET WELDS. EACH DESIGN WELD SIZE ON MAIN MEMBER TO MAIN MEMBER AND SECONDARY MEMBER TO MAIN MEMBER WELDMENTS. ALL STOP-STARTS AND WELD TERMINI. ALL LINEAR INDICATIONS SHALL FURTHER BE EVALUATED WITH 10X OR 30X MAGNIFICATION. VERIFICATION SHALL BE RESOLVED BY EXCAVATION.

    (3) GROOVE WELDS. ALL THROUGH THICKNESS EDGES ON TRANSVERSE BUTT JOINT WELDMENTS IN TENSION AREAS.

    (4) REPAIRS. ALL REPAIR WELDS TO CORRECT DEFECTS IN GROOVE AND FILLET WELDS, PLATE CUT EDGES, CORRECTION OF FABRICATION ERRORS IN CUTTING, PUNCHING, DRILLING, OR FITTING, AND MEMBERS WHICH ARE TACKED OR WELDED AND SUBSEQUENTLY CUT APART AND REWELDED.

13. ALL CIRCUMFERENTIAL AND ALL LONGITUDINAL PIPE SEAM WELDS WITHIN 5" OF FULL PENETRATION CIRCUMFERENTIAL GROOVE WELDS SHALL BE FULL PENETRATION GROOVE WELDS AND SHALL BE INSPECTED AS SPECIFIED HEREIN. THE ACCEPTABLE MAXIMUM WELD UNDERCUT IS 0.01".

MATERIALS

COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
POSTS SHAFT	A595 GR. A OR A572	55
BASE PLATES	A36	36
POLE TOP PLATE	A36	36
TENON - D.O.M. TUBING	---	50
ANCHOR BOLTS	F1554 GR. 55	55
H.S. BOLTS	A325	---
H.S. NUTS	A563	---
WASHERS	F436	---
GALVANIZING	A123 & A153	---

INDEX

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Print Date: 9/26/2012		Sheet Revisions			Colorado Department of Transportation
File Name: CCTV_01of4.dgn		Date:	Comments	Init.	425 C Corporate Circle Golden, CO 80401 Phone: 303-512-5801 FAX: 303-512-5878
Horiz. Scale: 1:1.00057 Vert. Scale: As Noted	R-X				HQ ITS Branch JS
Unit Information JS					

As Constructed	CCTV POLE WITH LOWERING DEVICE		Project No./Code
No Revisions:			BR 0061-083
Revised:	Designer: MDF	Structure Numbers	
Void:	Detailer: JRM		Sheet Number
	Sheet Subset: ITS	Subset Sheets: 1 of 4	